Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5636/4
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Hamersley Exploration Pty Ltd**

1.3. Property details

Property: Exploration Licence 47/584
Exploration Licence 47/631
Exploration Licence 47/1943
Local Government Area: Shire of Ashburton
Colloquial name: Juna Downs Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
125		Mechanical Removal	Mineral Exploration, Hydrogeological Drilling and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 19 April 2018

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The vegetation of the application area is broadly mapped as the following Beard vegetation association:

18: Low woodland; mulga (*Acacia aneura*) (GIS Database).

A flora and vegetation survey was conducted over the application area by Biota Environmental Sciences during October, 2017. The following seven vegetation associations were recorded within the application area, and disturbed areas (exploration and access tracks) accounted for 7.8 hectares (0.7%) of the study area (Biota, 2018):

ChCdEgTv: *Corymbia hamersleyana*, *C. deserticola* subsp. *deserticola* scattered low trees over *Eucalyptus gamophylla* low open mallee woodland over *Triodia vanleeuwenii* open hummock grassland;

El(Eg)AsppTw(Tv): *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees (over *E. gamophylla* scattered low mallees) over *Acacia* spp. Mixed scattered tall shrubs over *Triodia wiseana*, (*T. vanleeuwenii*) open hummock grassland;

PAprAsppSENaoTwTmARc: *Acacia pruinocarpa* scattered low trees over *Acacia* spp. Mixed tall open shrubland over *Senna artemisioides* subsp. *oligophylla* scattered shrubs over *Triodia wiseana*, *T. melvillei* open hummock grassland over *Aristida contorta* scattered bunch grasses;

CdAapAmiTm: *Corymbia deserticola* subsp. *deserticola* scattered low trees over *Acacia aptaneura*, *A. minyura* tall open shrubland over *Triodia melvillei* open hummock grassland;

Aap(Apr)THt(CHfDIGb)Arc*: Acacia aptaneura*, (*A. pruinocarpa*) low open woodland over *Themeda triandra*, (*Chrysopogon fallax, Digitaria brownii*) open tussock grassland over *Aristida contorta* very open bunch grassland;

ElTHmTpTv: *Eucalyptus leucophloia* subsp. *leucophloia* scattered low trees over *Themeda* sp. *Mt Barricade (*M.E. Trudgen 2471) tussock grassland over *Triodia pungens*, *T. vanleeuwenii* very open hummock grassland;

ChAeGOrApyTHtCYsppTp: *Corymbia hamersleyana* low open woodland over *Acacia elachantha*, *Gossypium robinsonii* tall open shrubland over *Acacia pyrifolia* var. *pyrifolia* scattered shrubs over *Themeda triandra, Cymbopogon* spp. open tussock grassland over *Triodia pungens* very open hummock grassland.

Clearing Description

Juna Downs Project
Hamersley Exploration Pty Ltd proposes to clear up to 125 hectares of native vegetation within a total boundary of approximately 2,014 hectares for the purpose of mineral exploration. The project is located approximately 73 kilometres east, south-east of Tom Price, in the Shire of Ashburton.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

to

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

Comment

Vegetation condition appears to have been recorded using the scale created by Trudgen (1988). These vegetation condition ratings have been converted to the scale implemented by Keighery (1994).

Clearing permit CPS 5636/1 was granted by the Department of Mines and Petroleum on 29 August 2013 and authorised the clearing of 35 hectares within a boundary of approximately 778 hectares. CPS 5636/1 was amended on 16 January 2014 to increase the area authorised to clear to 43 hectares and increase the permit boundary to approximately 857 hectares. In August 2016 CPS 5636/3 was granted, increasing the clearing authorisation to 100 hectares and including hydrogeological drilling and associated activities to the purpose of clearing.

This current application CPS 5636/4 proposes to increase the authorised clearing by 25 hectares to a total of 125 hectares within a boundary of approximately 2,014 hectares.

3. Assessment of application against Clearing Principles

Comments

Hamersley Exploration Pty Ltd has applied to increase the clearing authorised by 25 hectares and extend the permit boundary to approximately 2,014 hectares.

There has not been any Threatened or Priority Ecological Communities recorded within the ammendment application area (Biota, 2018; GIS Database). All of the vegetation communities recorded within the permit area are considered to be well represented in the region (Biota, 2018).

No species of Threatened flora have been recorded within the application area and the habitat present is not likely to support Threatened flora species known in the Pilbara (Biota, 2018). Biota Environmental Sciences conducted a targeted vegetation, flora and fauna habitat assessment survey of the study area which encompassed the additional expanded areas of the permit only. Five species of Priority flora were recorded within the survey area; *Rhagodia* sp. Hamersley (M.E. Trudgen 17794) (Priority 3), *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (Priority 3), *Aristida lazaridis* (Priority 2) and *Acacia bromilowiana* (Priority 4) (Biota, 2018).

Aristida lazaridis (Priority 2) was recorded from a single location during the survey, comprising approximately 10 individuals. This species is an upright perennial grass that grows up to 1.5 metres tall. Prior to the current survey *Aristida lazaridis* was only known from eight alternate locations (WA Herbarium, 2018; Biota, 2018), the closest being approximately 10 kilometres away (Biota, 2018).

The taxa recorded in the survey results are relatively typical across the Pilbara, although *Aristida lazaridis* is known from only nine locations (Western Australian Herbarium, 2018). A flora management condition may reduce potential impacts on this species.

No significant fauna habitats such as caves, waterholes, significant drainage features, large tree hollows or termite mounds have been observed within the application area (Biota, 2018). Four fauna habitat types occur within the application area, however it is dominated by stony *Triodia* plains. The predominant stony hardpan and open vegetation cover of the study area are not typical of areas of high faunal diversity (vertebrate or invertebrate) due to an absence of available microhabitats to provide retreats from predators and the elements (Biota, 2018). This habitat is common locally and regionally. The fauna habitats present are considered to be common and widespread throughout the region (Biota, 2018).

There were five Western Pebble-mound Mouse mounds (*Pseudomys chapmanii* - Priority 4) recorded within the permit area (Biota, 2018). Suitable habitat for this species is widespread throughout the region. The additional 25 hectares of clearing is not likely to have a significant impact on this species above that of the previous permit (CPS 5636/3).

There are no permanent watercourses or wetlands within the permit area, however there are numerous ephemeral watercourses that dissect the area, flowing from the Hamersley Range south through the study area and eventually into the Mulga-dominated lower plains surrounding Juna Downs station (Biota, 2018; GIS Database). These watercourses only flow following significant rainfall events. The clearing of an additional 25 hectares within the permit area is not likely to have a significant impact on the quality of surface or ground water within the local area.

The proponent has committed to undertake the clearing activities in accordance with the Environmental Management Plan - Evaluation and Exploration within areas of Conservation Significance (Rio Tinto, 2013). This management plan states that disturbance to drainage lines will be avoided where practicable during the planning and execution of mineral exploration drilling programmes (Rio Tinto, 2009).

The permit area is situated within the Boolgeeda, Wannamunna, Newman and Paraburdoo land systems (Van Vreeswyk et al, 2004; GIS Database). These land systems are either resistant to erosion or have experienced little erosion to date (Van Vreeswyk et al., 2004). The proposed additional clearing is not likely to result in a significant increase in the levels of land degradation in the permit area.

The permit boundary abuts the boundary of Karijini National Park (GIS Database). Care needs to be taken to ensure that clearing activities do not increase the spread of weeds into the National Park. Potential impacts from weed species may be minimised by the continued implementation of the existing weed management condition.

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (f), may be at variance to Principle (a), is not likely to be at variance to Principles (b), (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e).

Methodology

Biota (2018)
Rio Tinto (2009)
Rio Tinto (2013)
Van Vreeswyk et al (2004)
Western Australian Herbarium (2018)

GIS Database:
- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Soils, Statewide
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffered
- Threatened Fauna

Planning Instrument, Native Title, previous EPA decision or other matter.

Comments

There is one Native Title claim over the area (WC2011/006) (DPLH, 2018). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2018). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The amendment application was advertised on 05 March 2018 by the the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

Methodology

DPLH (2018)

4. References

Biota Environmental Sciences (2018) Juna Downs Native Vegetation Clearing Permit Report, Report Prepared for Rio Tinto by Biota Environmental Sciences, Leederville, Western Australia

DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 02 March 2018).

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Rio Tinto (2009) Environmental Management Plan - Evaluation and exploration drilling within areas of conservation significance Version 1.4.

Rio Tinto (2013) Application for a clearing permit (Purpose Permit) (Juna Downs) Mineral Exploration and Assorted Activities - Tenements E47/631 and E47/584.

Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

Western Australian Herbarium (2018) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au/ (Accessed 2 March 2018)

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DBCA	Department of Biodiversity Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
DWER	Department of Water and Environmental Regulation, Western Australia
EPA	Environmental Protection Authority, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2017) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950,* listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act 1950*.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN **Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU **Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX **Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA **Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD **Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS **Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P **Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species:**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey

requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring:**
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Principles for clearing native vegetation:

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.